

DESCRIPTIONS OF NEW AUSTRALIAN FISHES.

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(Notes from the Australian Museum).

OPISTHOGNATHUS INORNATUS, sp. nov.

B. vi. : D. 12/16 : A. 2/14 : V. 1/5 : P. 21 : C. 14.

Length of head 3, of caudal fin 5, height of body $4\frac{1}{2}$ in the total length. *Eye*—diameter $3\frac{1}{4}$ in length of head, $\frac{1}{2}$ a diameter from the end of snout, and $\frac{1}{4}$ of a diameter apart. Greatest width of head equals $\frac{5}{9}$ of its length. The maxilla is dilated and rounded posteriorly, it does not quite reach to the preopercular angle, and is $\frac{2}{3}$ of the length of head. Opercles with two weak spines. *Teeth*—jaws with an outer row of strong curved teeth : behind these in the upper jaw is a band of similar but much smaller teeth, the inner row being slightly the largest, while the small teeth extend back in a gradually narrowing band as far as the enlarged outer row : in the lower jaw the inner band only extends a short way on each side of the symphysis, and its inner row is almost as well developed as the outer. *Fins*—dorsal spines weak ; the posterior rays about twice the height of the highest spine. Pectoral fin $\frac{3}{7}$, ventral $\frac{4}{7}$ of the length of the head. *Scales*—very small. The lateral line ceases beneath the ninth dorsal ray. *Colors*—uniform brown.

We received two examples of this species from Derby, whence they were brought by Mr. C. Lees. Their respective measurements are $9\frac{3}{4}$ and 11 inches. Register numbers, I. 841,-2.

COSSYPHUS BELLIS, sp. nov.

B. vi : D. 12/11 : A. 3/12 : V. 1/5 : P. 17 : C. 14 : L. lat. 32. L. tr. 5/13.

Length of head $3\frac{1}{2}$, of caudal fin $5\frac{1}{2}$, height of body $3\frac{2}{3}$ in the total length. *Eye*—Diameter $4\frac{1}{4}$ in the length of the head, $1\frac{1}{2}$ in

that of the snout, and $1\frac{1}{6}$ apart. The greatest height of the head is equal to its length without the snout. The maxilla extends to the vertical from the anterior margin of the orbit. *Teeth*—Both jaws are armed anteriorly with two pairs of canines, the inner pair of the lower jaw being much smaller than the outer, while the corresponding pair in the upper jaw are rather larger: a lateral row of strong compressed subulate teeth, inside of which are several irregular rows of minute granulose teeth. A posterior canine. The vertical limb and angle of the preopercle finely serrated. *Fins*—Dorsal spines strong, the last the longest, $\frac{2}{5}$ of the length of the head; the rays (5-8) much longer than the spines. The third anal spine slightly longer than the twelfth dorsal; all three very strong. Pectoral fin rounded posteriorly, $\frac{2}{3}$ of the length of the head; ventrals shorter than the pectorals, none of the rays produced; caudal emarginate. *Scales*—Six rows on the opercles, seven on the cheeks. *Colors*—Pale red on the back and sides, yellowish below; each scale with a darker longitudinal mark forming narrow bands along the sides; two broader bright red bands take their rise from the posterior margin of the eye, and gradually diverge till opposite the middle of the spinous dorsal, whence they run parallel to opposite the middle of soft dorsal where they cease; they are interrupted, forming oblong spots; axil bright red.

This beautiful fish was obtained at Shoalhaven during the last week of July, and sent from there to the Sydney market, whence it passed into our hands. It measured nearly eleven inches, and showed no signs of spawning. Register number, I. 1362.

TRICHIURUS COXII, sp. nov.

B. vii.: D. 140: P. 11: Cœc. pyl. 25.

Length of head 8, height of body $16\frac{3}{4}$ in the total length. *Eye*—diameter $6\frac{1}{3}$ in the length of the head, and rather more than two diameters from the end of the snout. Interorbital space flat, $\frac{4}{5}$ of a diameter of the eye. Lower jaw much the longer; the maxilla reaches to the vertical from the middle of the eye. Occiput with a sharp central ridge terminating behind in a

prominent point. *Teeth*—upper jaw with two pairs of strong barbed anterior canines, and eight sharp compressed teeth in each ramus; twelve similar teeth in the lower jaw, those immediately behind the first pair being much smaller than the posterior ones: a band of minute teeth on the palatines. *Fins*—the dorsal commences above the preopercle; its greatest height is equal to the distance between its base and the lateral line: pectoral short, obliquely truncate behind, rather less than $\frac{1}{3}$ of the length of head. The free portion of the tail exactly equals the length of the head. The distance between the snout and the anus is $\frac{4}{11}$ of the total length. *Colors*—silvery: a black blotch between 1st and 4th dorsal rays; the outer half of the dorsal fin dark grey throughout its entire length. Pectoral fins blackish, except near the base. Inside of mouth black. Irides silvery.

We are indebted to Dr. James Cox for the specimen above described, which was sent to him from Broken Bay, during the month of July last, and measured $37\frac{1}{2}$ inches. Register number, I. 1342.

NEOPEMPHERIS PECTORALIS, sp. nov.

B. vi.: D. $4/17$: A. $3/26$: V. $1/5$: P. 17: C. 17: L. l. 74: L. tr. $11/10$.*

Length of head $5\frac{3}{8}$, of caudal fin $4\frac{3}{8}$, height of body $3\frac{5}{8}$ in the total length. *Eye*—diameter $3\frac{8}{9}$ in the length of the head, with well developed adipose lids, the posterior of which passes beyond the edge of the iris, while the anterior does not quite reach it; snout obtuse, about $\frac{7}{8}$ of the diameter of the eye, and a trifle less than the interorbital space, which is slightly convex, as is also the upper profile of the head. The greatest width of the head equals $\frac{5}{9}$ of its length, and its height is but little less than the same. The maxilla reaches considerably beyond the hinder margin of the eye, and is concealed beneath the preorbital during the anterior three-fifths of its length, the posterior two-fifths being falciform. Preopercular angle slightly produced; the lower limb feebly serrated. *Teeth*—both jaws with numerous rows of

* Counted from origin of dorsal fin to base of anal.

small cardiform teeth, which are of equal size in the upper jaw, but in the lower increase in size from without, the inner row being much the strongest and inclined backwards: vomer, palate, and tongue with patches of villiform teeth. *Fins*—the dorsal commences much nearer to the base of the caudal than to the tip of the snout; its anterior rays are highest, but little shorter than the head, the last seven rays of about equal length, giving a deeply concave appearance to the outer edge of the fin: the anterior anal rays are half the length of the base of the fin, which commences in front of the origin of the dorsal: ventrals short, reaching half-way to the origin of the anal; an elongate pointed scale at the outside of the base, and a single similar scale between them: pectoral rather shorter than the head, reaching to the vertical from the 24th scale of the lateral line; its posterior margin slightly concave; caudal deeply emarginate. *Scales*—rather small, finely ctenoid, and firmly adherent; entire head, except a small patch on the snout, covered with scales; dorsal, anal, and pectoral fins scaly to their tips: there are fourteen rows of scales between lateral line and vent. *Lateral line*—sinuous to above the vent, from whence it runs straight to the middle of the base of the caudal. *Pseudobranchiae*—well developed. *Gill-rakers*—of moderate length, and slender. *Colors*—silvery, the back with brilliant blue reflections; fins dusky.

The single specimen which we possess, and from which the above description is taken, was obtained during the recent expedition to New Guinea, led by Mr. T. Bevan, by jumping into their boat, the locality being about thirty miles up the Aird River from its mouth. Register number, I. 1308.

Though undoubtedly having a very close resemblance to the previously described *Neopempheris ramsayi*, Macleay, from Rockingham Bay, the type of which is also in the Australian Museum, this species differs in many particulars from the older form, and may be distinguished from it at a glance by the absence of the black dorsal spot so conspicuous in Mr. Macleay's fish; while the shape of the lateral line and the much larger pectoral fins of our fish also furnish easy distinguishing characters.